



# ***4/8/16 port AUTO KVM SWITCH***

## USER'S MANUAL



### **4/8/16 PORT AUTO KVM SWITCH**

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☐ MU41X    ☐ MU81X    ☐ MU161X

# Content

|                                                          |    |
|----------------------------------------------------------|----|
| I.FUNCTION.....                                          | 2  |
| II.OPERATION.....                                        | 2  |
| 1.Front Panel Push Buttons.....                          | 2  |
| 2.Hot-key Commands.....                                  | 2  |
| 3.Using numerical key to select PC.....                  | 3  |
| 4.Press <F1> key to activate the AUTO SCAN function..... | 3  |
| 5.<F2> key SELECT PC function.....                       | 4  |
| 6.<F3> key SEARCH PC function.....                       | 5  |
| 7.<F4> key EDIT PC NAME function.....                    | 6  |
| 8.<F5> key MORE SYSTEM function.....                     | 7  |
| 9.<F6> key EDIT UNIT/PC PSW.....                         | 8  |
| 10.Enable Password.....                                  | 9  |
| 11.<F7> enter OSD position adjustable function.....      | 10 |
| 12.<F8> to enter the screen display HELP.....            | 11 |
| III.FEATURES.....                                        | 11 |
| IV.SPECIFICATION.....                                    | 12 |
| V.INSTALLATION.....                                      | 12 |
| • Configurations.....                                    | 12 |
| • Single Configuration.....                              | 12 |
| • Cascade (Master/Slave) Configuration.....              | 13 |
| VI.LIMITED WARRANTY.....                                 | 13 |
| VII.TROUBLE SHOOTING.....                                | 14 |

## I.FUNCTION

1. This operation manual is adapted to Auto Multi-PCs Controller which are available with OSD (ON SCREEN DISPLAY) support. This series of model can be connected as a first level of a MASTER unit in cascade configuration.

2. When multi models are cascaded, the one which has a mouse, a keyboard and a monitor connected to its Console port directly and operated by a user called "MASTER"; other cascaded models are called "SLAVE". The console side of each SLAVE has to be connected to the PC side of MASTER.

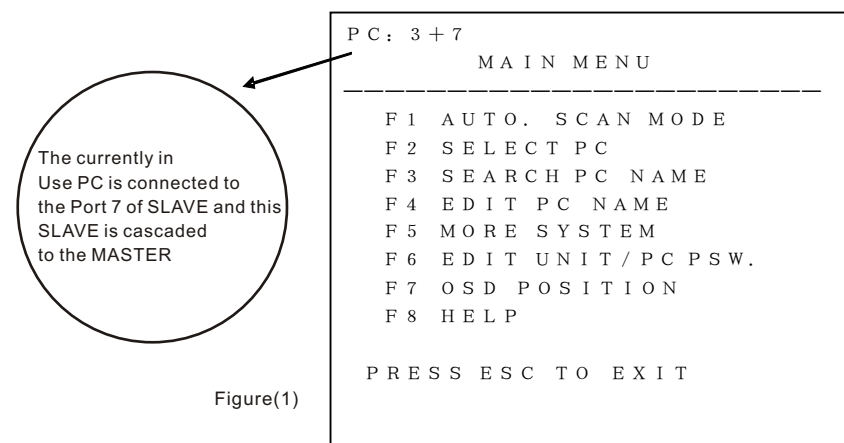
3. For these models with built-in OSD (ON SCREEN DISPLAY) control, user can easily be aware of the system status and operations through on screen menu.

4. These series of models can set up individual PC name and search the PC by name.

5. Password setup and management are available. If the password is built, you must input the correct password to access the target PC.

6. AUTO SCAN function is available, Scan time interval is adjustable.

## II.OPERATION



### 1. Front Panel Push Buttons

A. Selecting the PC by pressing the front panel push button directly.

B. The Auto Scan button of SLAVE will be disable when in cascade configuration.

### 2. Hot-key Commands

A. HOT-KEY can be set as <SCROLL > key (original design) or <L-CTRL> (LEFT CTRL) key.

B. Press HOT-KEY twice (Within 3 seconds) (Remark: Press HOT-KEY only one time when password is accepted), then into the HOT-KEY MAIN MENU mode.

C. When on MAIN MENU screen, the OSD display is shown as Figure(1):  
D. Line one shows PC:3+7 which indicates that the currently in use PC is connected to the port 7 of SLAVE and this SLAVE is cascaded to the MASTER port 3.

E. Under this screen mode, user can press button<F1>, <F2>, <F3>, <F4>, <F5>, <F6> for activating its function and can also press number key (0-9) to select PC.

F. While activating the HOT-KEY commands, MOUSE will be disable temporarily, KEYBOARD can only control the OSD screen but CANNOT control the selected PC.

G. Press <ESC> to exit the MAIN MENU screen and return to the PC operation, the MOUSE and KEYBOARD can then work normally.

### 3. Using numerical key to select PC

A. Press the numerical key once and the screen sill show as Figure(2), then press 0-9 to select PC.

B. The port number which is connected to the MASTER should be input first and following press <+> and then press the port number of the SLAVE which is connected to the selected PC.

C. Hit <ENTER> to confirm. You can access the selected PC immediately if it is powered on.

D. If the selected PC has not been powered on, OSD shows "DISABLE".

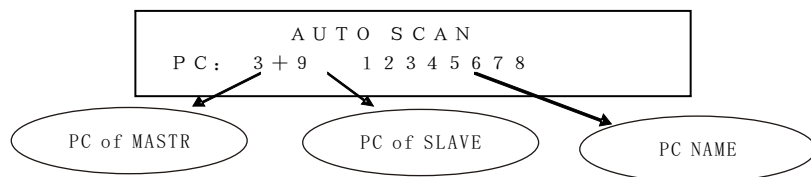
E. If selected wrong PC number, OSD displays "ERROR".



Figure(2)

### 4. Press <F1> key to activate the AUTO SCAN function

A. In MAIN MENU, hitting <F1> key is to indicate to enter into AUTO SCAN function, OSD will display as Figure(3).



B. Under AUTO SCAN mode, the LED indicator of USER KEYBOARD flashes according to different Scan Rate.

C. Under AUTO SCAN mode, hitting <-/\_> or <-> key is to adjust down the SCAN RATE.

D. Under AUTO SCAN mode, hitting <=/+> or <+> key is to adjust up the SCAN RATE.

E. Table (1) shows the comparative list of LED light of Keyboard and the SCAN RATE.

Table(1)

| Sec | NUM LOCK | CAPS LOCK | SCROLL LOCK |
|-----|----------|-----------|-------------|
| 5   | OFF      | OFF       | ON          |
| 10  | ON       | OFF       | OFF         |
| 15  | ON       | OFF       | ON          |
| 20  | OFF      | ON        | OFF         |
| 25  | OFF      | ON        | ON          |
| 30  | ON       | ON        | OFF         |

F. Under AUTO SCAN mode, hitting<-> key is to select the nest powered-on PC.

G. Under AUTO SCAN mode, hitting<-> key is to select the previous powered-on PC.

H. Exit Auto SCAN mode:

Press <ESC> key to exit the AUTO SCAN and return to the selected PC and also enter into the MENU mode operation, and the MOUSE and KEYBOARD then work normally.

### 5. <F2> key SELECT PC function

A. Under MAIN MENU mode, hit <F2>key to enter the select PC function, the screen displays as Figure(4).

B. Under the mode, use <↓> or <↑> key to move the cursor (CURSOR), use <ENTER> to confirm the PC selection.

C. Only for 16 port model , you can use <Page Up> and <Page Down> key to display more PC information.

D. Under OSD display: right side (STU) field shows the selected PC status:

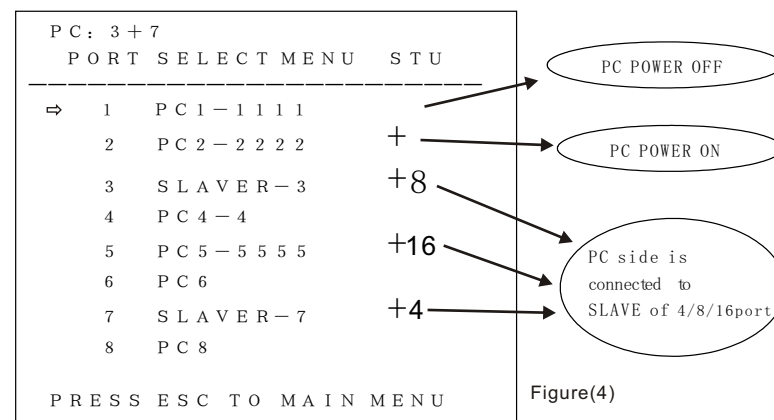
+ :selected PC is POWER ON;

+ 4:selected PC is daisy-chained to 4 port model series which have MASTER / SLAVE Configuration.

+ 8:selected PC is daisy-chained to 8 port model series which have MASTER / SLAVE Configuration.

+16:selected PC is daisy-chained to 16 port model series which have MASTER / SLAVE Configuration.

E. Line one shows PC: 3+7 which indicates that the selected PC is Port 7 of SLAVE and this SLAVE is daisy-chained to MASTER port 3. (Figure(4))



Figure(4)

E. If cursor  selects the PC which is remarked with “⊕” means that the PC is daisy-chained to the SLAVE. Hit <ENTER> or <-> to enter into the cascaded SLAVE. OSD shows the selected daisy-chained PC information (see Figure(5)). On the right side of Line 1 of Figure(5) shows “SLAVER:??” to identity the on screen information is from?? Port of SALVER.

| PC: 3+7                             |               | SLAVER: 3 |          |
|-------------------------------------|---------------|-----------|----------|
| PORT                                |               | SELECT    | MENU STU |
| -----                               |               |           |          |
| ⇒ 1                                 | S 3 - P C 1   | 1 1 1     |          |
| 2                                   | S 3 - P C 2   | 2 2 2     | +        |
| 3                                   | E M A I L - 1 |           | +        |
| 4                                   | S M P T - 3   |           |          |
| 5                                   | S 3 - P C 5   | 5 5 5     | +        |
| 6                                   | S 3 - P C 6   |           |          |
| 7                                   | S 3 - P C 7   |           | +        |
| 8                                   | S 3 - P C 8   |           |          |
| P R E S S E S C T O M A I N M E N U |               |           |          |

Presents the OSD screen information is from SLAVE 3

E. Shown SLAVE PC information as Figure(5), press <-> to return to the MASTER PC (shown as Figure(4)).

F. Press <ESC> key to come back to MAIN MENU (Shown Figure(1)).

6. <F3> key SEARCH PC function

A. On MAIN MENU screen mode, press <F3> to enter into PC NAME input mode to search for the target PC, OSD message shown as FIGURE(6).

SEARCH NAME : ?

Figure(6)

B. Input at most 16 characters ( <A~Z>, numerical <0~9> and <-> etc) and press <ENTER> as confirmation. For example: input <PC12345> and hit <ENTER> to start searching the target PC <PC12345>. When targeted PC is found, it will switch to the PC autocratically.

C. If no PC NAME is matched, the OSD will display “ERROR” message (shown as Figure(7)).

ERROR  
SEARCH NAME : Pc12345

Figure(7)

D. If the searched PC is powered off, the OSD will display “DISABLE” message (shown as Figure(8)).

DISABLE  
PC : 12 + 5 Pc12345

Figure(8)

7. <F4> key EDIT PC NAME function

A. Under MAIN MENU mode: hit <F4> key to enter the edit PC name operation (shown as Figure(9)), on the Line 1 of Figure(9) show PC : 2 indicating the current screen information is from the second PC.

| PC: 2                               |                 |           |     |
|-------------------------------------|-----------------|-----------|-----|
| PORT                                |                 | NAME EDIT | STU |
| -----                               |                 |           |     |
| 1                                   | P C 1 - 1       | 1 1 1 1   |     |
| 2                                   | P C 2 - 2       | 2 2 2 2   | +   |
| 3                                   | S L A V E R - 3 |           | +8  |
| 4                                   | P C 4 - 4       |           |     |
| 5                                   | P C 5 - 5       | 5 5 5 5   | +   |
| 6                                   | P C 6           |           |     |
| 7                                   | S L A V E R - 7 |           | +8  |
| 8                                   | P C 8           |           |     |
| P R E S S E S C T O M A I N M E N U |                 |           |     |

Figure(9)

B. Under OSD mode: on the right side of (STU) field show the status of PC:

+ : PC is POWER ON;

+ 8: PC is daisy-chained to 8 port model series which have MASTER / SLAVE Configuration.

C. use <↓> or <↑> key to move the cursor  (CURSOR), hit <ENTER> to enter the edit PC name operation (shown as Figure(10)).

D. In Figure(10) the cursor  indicates to edit the name of PC2. the cursor becomes the icon  prompt to indicate the location you are editing. Input at most 16 characters (<A~Z>, numerical <0~9> and <-> etc) and press <ENTER> as confirmation.

E. Edit SLAVE PC name: use <↓>, <↑>, <Page Up>, <Page Down> to select the PC of SLAVE. Then press <-> to select the daisy-chained SLAVE PC, the OSD screen shows as Figure (11): the right side of Line 1 shows “SLAVER:3” indicating the current screen display is from ?? SLAVE.

| PC: 2                  |           | PORT NAME EDIT | STU |
|------------------------|-----------|----------------|-----|
| 1                      | PC 1-1111 |                |     |
| ⇒ 2                    | ■         |                | +   |
| 3                      | SLAVER-3  |                | +8  |
| 4                      | PC 4-4    |                |     |
| 5                      | PC 5-5555 |                | +   |
| 6                      | PC 6      |                |     |
| 7                      | SLAVER-7  |                | +8  |
| 8                      | PC 8      |                |     |
| PRESS ESC TO MAIN MENU |           |                |     |

Figure(10)

| PC: 2                  |             | SLAVER: 3 | PORT NAME EDIT | STU |
|------------------------|-------------|-----------|----------------|-----|
| 1                      | S 3-PC 1111 |           |                |     |
| ⇒ 2                    | S 3-PC 2222 |           |                | +   |
| 3                      | EMAIL-1     |           |                | +   |
| 4                      | SMPT-3      |           |                |     |
| 5                      | S 3-PC 5555 |           |                | +   |
| 6                      | S 3-PC 6    |           |                |     |
| 7                      | S 3-PC 7    |           |                | +   |
| 8                      | S 3-PC 8    |           |                |     |
| PRESS ESC TO MAIN MENU |             |           |                |     |

Figure(11)

F. Figure (11) shows the selected SLAVE PC information; hit <←> key to return to the MASTER PC mode (shown as Figure(9)).

G. Hit <ESC> to back to the MAIN MENU mode (shown as Figure (1)).

8. <F5> key MORE SYSTEM function

A. Under MAIN MENU mode: hit <F5> key to enter the MASTER PC setting operations. You can hit <↓> or <↑> or <←> or <→> key to setup these parameters.(shown as Figure (12))

B. Hit <↓> or <↑> key to move cursor and select item.

C. Hit <←> or <→> key to change the setting.

D. Hit <ESC> to go back to the MAIN MENU (Figure (1)) shown as follow:

| PC: 3+7                |                  | MORE SYSTEM |
|------------------------|------------------|-------------|
| ⇒                      | POWER ON SCAN    | OFF         |
|                        | SCAN TIME        | 5 SEC       |
|                        | HOT-KEY          | SCROLL      |
|                        | BUZZER           | ON          |
|                        | BACKGROUND COLOR | ON          |
| ↓                      | ↑                | FOR SELECT  |
| ◀                      | ▶                | FOR SET     |
| PRESS ESC TO MAIN MENU |                  |             |

Figure (12)

E. POWER ON SCAN setup:

a. OFF after resetting the MASTER PC, POWER ON SCAN will search and switch to the PC which is power on directly.

b. ON After resetting MASTER PC, POWER ON SCAN will activate the AUTO SCAN function, the operation step is same as above step 4.

F. SCAN TIME setup:

Same as {4-E}Table(1).

G. HOT-KEY setup:

Two choices - <SCROLL> and <L-CTRL>.

H. BUZZER setup:

a. OFF BUZZER is DISABLE while hitting HOT-KEY and front panel push button.

b. ON BUZZER is ENABLE while hitting HOT-KEY and front panel push button.

J. BACKGROUND COLOR setup:

a.OFF No background color

b. ON the background color is light -blue.

9. <F6> key EDIT UNIT/PC PSW

A. Password setting: MASTER Password and PC side Password.

a. MASTER Password: Controlling and Editing the MASTER password. When user enters the HOT-KEY mode, hit <F6> to edit password. OSD will ask for the correct password of MASTER (shown as Figure(13)). After entering the correct password, user are allowed to use the device.

UNIT PSW.:?

Figure (13)

b. PC Password: Controlling the operation of PC side. User will be asked for the password, only when the password id entered correctly will the user be allowed to use this PC. OSD screen shown as Figure (16).

B. Under MAIN MENU mode: hit <F6> key for password editing and if the MASTER password function has been already set, the OSD will ask for entering the password of MASTER (as Figure(13)). Only when the password is entered correctly will the user be allowed to use this device, OSD Shown as Figure(14).

Figure(14)

```

PC: 2
  EDIT UNIT OR PORT
-----
⇒ 1 EDIT UNIT PSW.
   2 EDIT PC PORT PSW.

PRESS ESC TO MAIN MENU
  
```

C. Under MAIN MENU mode: hit <F6> key for password editing. If the password function of MASTER is not set yet (UNIT PSW.) ,you can deit new password directly (OSD screen shown as Figure(14)).

D. Enter Editing function shown as Figure(14)

- Editing MASTER password (EDIT UNIT PSW.)
- Editing PC password (EDIT PC PORT PSW.) including editing the PC password of SLAVE.

E. Select 1 means to EDIT UNIT PSW. : Editing MASTER password, OSD will show as Figure(15), user should type 1-8 characters (valid characters are <A-Z>, <0-9> and <->) as the new password of MASTER and then press <ENTER> as confirmation. User should keep the new password firmly in mind.

```

NEW PSW.:?
  
```

Figure (15)

F. Select 2 to EDIT PC PORT PSW. : OSD will show as Figure(15). User can use <↓> or <↑> to move  (CURSOR) and press <ENTER> to select PC. The procedure of PC password edition is same as step 6.

10. Enable Password:

A. If selected PC has setup the password. OSD will ask for entering the password of the PC, (Shown as Figure (16)). Correct password is required to use the selected PC.

```

PC  PASSWORD  : ?
PC:  12+5    — PC12345
  
```

Figure(16)

B. When user enter the wrong password, the OSD will show message “ ERROR” (Shown as Figure(17)). User will be asked for re-entering the correct password.

```

                ERROR
PC:  12+5    — Pc12345
  
```

Figure(17)

C. Under Figure (16) mode, user can hit HOT-KEY once to enter HOT-KEY MAIN MENU.

```

PC: 2
  PORT PSW.  EDIT      STU
-----
⇒ 1  PSW 1
   2  PSW 2          +
   3  PSW 3          +8
   4  PSW-4
   5  PSW-5 5 5 5    +
   6  PSW 6
   7  PSW 7          +8
   8  PSW 8

PRESS ESC TO MAIN MENU
  
```

Figure(18)

11. <F7> enter OSD position adjustable function

A. There are 2 kinds of OSD screen display adjustable, please refer to Figure(19). One is to adjust MAIN OSD POSITION. The other is to adjust BANNER OSD POSITION.

Figure(19)

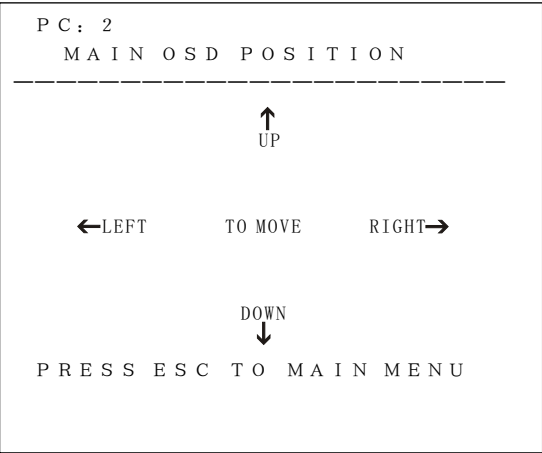
```

PC: 2
  OSD POSITION
-----
⇒ 1 MAIN OSD POSITION
   2 BANNER OSD POSITION

PRESS ESC TO MAIN MENU
  
```

B. After selecting the choice 1, the screen will enter into MAIN OSD POSITION, please refer to Figure(20).By then, the user can adjust MAIN OSD POSITION by hitting <↓>/<↑>/<←>/<→> key.

Figure(20)



C. When selecting the choice 2, the screen will enter into BANNER OSD POSITION, please refer to Figure(21). By then, the user can adjust BANNER OSD POSITION by hitting <↓>/<↑>/<←>/<→> key.



12. Hit <F8>key to enter the screen display HELP  
This displays the contact information about the manufacturer. The user can find instant technical support if the user met some usage difficulty. When the text is over one page, the user can hit <↓>/<↑> to select the page needed.

III.FEATURES

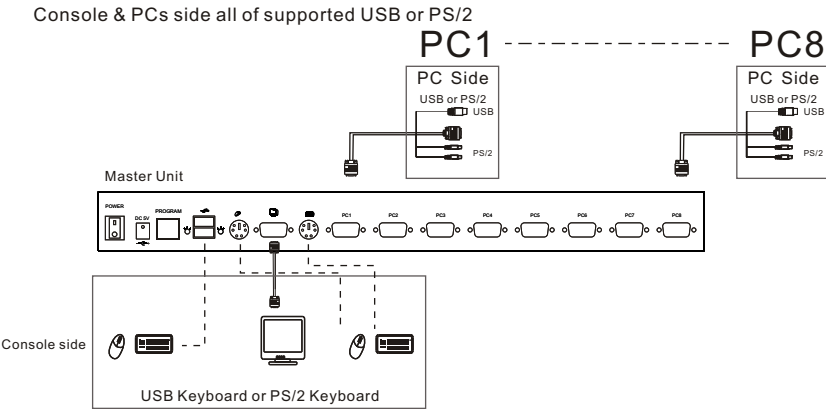
- A.Keyboard, mouse, monitor emulation & “PnP”.
- B.Auto scan, Manual selection, Hot Key control and by OSD menu.
- C. Keyboard, mouse reset.
- D. With OSD (ON SCREEN DISPLAY) and Daisy chain function.
- E. Reset Button: Reset mouse and keyboard simulation without power down the Pcs.

IV.SPECIFICATION

| Function                  | SPECIFICATION                           |            |             |
|---------------------------|-----------------------------------------|------------|-------------|
| *Model (USB)              | MU41X                                   | MU81X      | MU161X      |
| *Case design              | 19* Rack                                |            |             |
| *PC selection method      | Push Button / Keyboard Hot Keys/ OSD    |            |             |
| *PC side connector        | HD-15M × 4                              | HD-15M × 8 | HD-15M × 16 |
| *Console side connector   | HD-15F × 1 , MD-6F × 2 , USB A Type x 2 |            |             |
| *Dimension(L × W × H .mm) | 439mm × 189mm × 43. 5mm                 |            |             |
| *Power                    | DC12V                                   |            |             |
| *PC side to Switch        | 10 meters                               |            |             |
| *Console side to Switch   | 5 meters                                |            |             |
| *Max. Resolution          | 1600 × 1200                             |            |             |
| *Video Bandwidth          | 200MHz                                  |            |             |
| *Horizontal Frequency     | 30- 180KHz                              |            |             |
| *Vertical Frequency       | 43-250Hz                                |            |             |

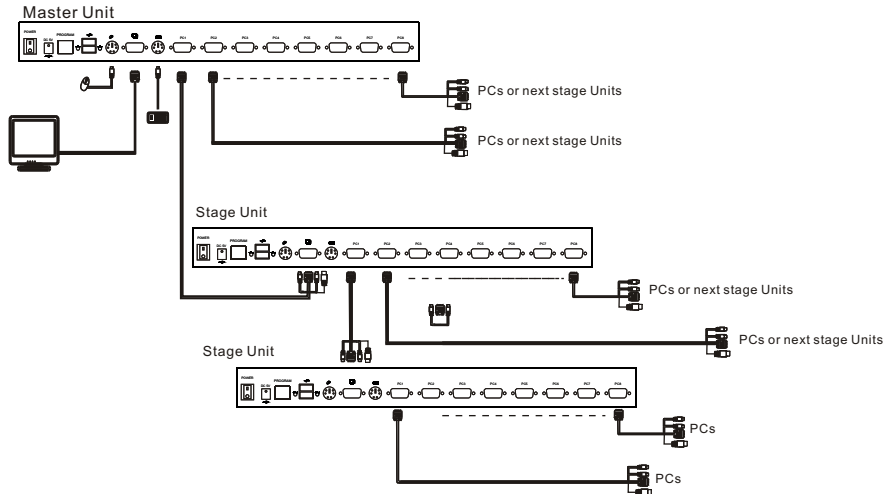
V.INSTALLATION

- Configurations  
For applications with a large number of computers, Auto Multi-PCs Controller can be cascaded in a MASTER / SLAVE configuration to support even more computers.
- Single Configurations  
Connects either a set of PS/2 mouse, PS/2 key board and monitor or a set of USB mouse, USB keyboard and monitor directly to the Mater Console Port. Then connect multiple sets of keyboard, mouse, and monitor cables to the “PC x” port.



#### • Cascade (Master/Slave) Configuration

You can connect a second level of one or more Auto Multi-PCs Controller to "PC1~PC6" or "PC1~PC8" ports of a Master unit. Cascade configuration expands system ability allowing you to select computers connected to the Master or Slaves. There is only one Master, which has a mouse, a keyboard and a monitor connected to its CONSOLE port directly operated by a user. Once connected, automatically configure themselves to other Master or Slave. Slaves of different Auto Multi-PCs Controller can be mixed in cascade configuration.



#### VI.LIMITED WARRANTY: \_\_\_\_\_

- 1.The product is freely repaired for 1 year since the buying date(according to the invoice date). If any malfunction appears during daily use, please contact with our customer department, and show your invoice when repairing.
- 2.The malfunctions caused by following reasons are not included in freely repairing
  - 1)Parts damage caused by artificial reasons (where is visible physical damage)
  - 2)Product's abnormal working caused by computer virus
  - 3)Parts damage and malfunction which appears during customer's transportation
  - 4)force majeure: abnormal working caused by earthquake, fire, accident(thieved, lost) etc.
  - 5)Product's abnormal working caused by self programmed software or third party software.
  - 6)Malfunction or damage caused by poor power environment or object entry inside.
  - 7)Malfunction caused by self disassembly or repairing.
- 3.No charge is taken for Other equipments' malfunction which is directly or indirectly caused by this product's malfunction.

#### VI.TROUBLE SHOOTING: \_\_\_\_\_

The reason for not compatible with Auto Multi-PCs Controller

1. The BIOS in the mother board. (Basic Input / Output System)
2. The hardware equipment. (Keyboard, Mouse)
3. Software, OS (Operating System)

| Situation          | Solution                                                                                                                                                                                                                                                                                                 |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mouse Hanged       | <ul style="list-style-type: none"> <li>* Check whether the mouse install mouse driver</li> <li>* Exchange other mouse (USB mouse only for user side)</li> <li>* Connect the mouse to PC directly</li> <li>* Exchange the PC port</li> <li>* Try to select other port and then switch back</li> </ul>     |
| Keyboard Hanged    | <ul style="list-style-type: none"> <li>* Exchange other Keyboard</li> <li>* Connect the USB keyboard to PC directly</li> <li>* Exchange the PC port</li> <li>* Try to select other port and the switch back</li> </ul>                                                                                   |
| Improper Operation | <ul style="list-style-type: none"> <li>* Do not move keyboard, mouse or select PC of the initial turn-on operation procedure is not completed Adjust the dip switch</li> <li>* Reboot after the PC is turned off for 5 seconds later</li> <li>* Try to select other port and then switch back</li> </ul> |